Contact: Joan Racki

REGISTER OF UNIVERSITY OF IOWA CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS

Actions Requested: Consider:

1. Approval of:
   a) The following actions for the **Cardiovascular Intensive Care Unit Renovation and Expansion** project:
      1. Acknowledge receipt of the University's final submission of information to address the Board's capital project evaluation criteria (see Attachment A);
      2. Accept the Board Office recommendation that the project meets the necessary criteria for Board consideration; and
      3. Approve the schematic design, project description and budget ($24,400,000), with the understanding that approval will constitute final Board approval and authorization to proceed with construction.

   b) The project description and budget for the **Parking Lot and Ramps – Expansion of Commuter Lot 75** ($3,444,429) project.

2. Ratification of Executive Director approval of the revised project budget for the **Oakdale Renewable Energy Plant – Install Biomass Gasifier and Steam Generator** ($7,308,779) project.

Executive Summary: The **Cardiovascular Intensive Care Unit Renovation and Expansion** project would provide for the renovation and expansion of the Cardiovascular Intensive Care Unit (CVICU) located on the fourth level of the John Colloton Pavilion (JCP); the development of a new mechanical penthouse on the ninth level of JCP and exterior mechanical chases large enough to accommodate air ducts to the fourth through eighth floors; renovation of an existing elevator bank to provide one car of sufficient size to transport critically ill patients between the CVICU, the operating room suite and other potentially needed services; and renovation of the former 3 South inpatient unit. The total area to be renovated on 4 JCP is approximately 23,000 gross square feet (GSF) and includes space currently occupied by the Medical Cardiology inpatient unit (approximately 11,300 GSF). The functions of this unit will be incorporated as step-down services in the expanded CVICU. Approximately 8,000 GSF will be renovated on 3 South. The project budget of $24,400,000 would be funded by University Hospitals Building Usage Funds. The schematic design booklet for the project is included with the Board's agenda materials; the project locations are included on page 3 of the booklet.

The **Parking Ramps and Lots – Expansion of Commuter Lot 75** project would expand the 406 space Arena Commuter Lot (Lot 75) by approximately 350 spaces. The lot is located directly south of Carver Hawkeye Arena along the south side of Hawkins Drive. The area of expansion is the former Grant Field site (intercollegiate field hockey), directly south of the present lot (see Attachment B for map). The total project cost of $3,444,429 would be funded by Parking Improvement and Extension funds.

The **Oakdale Renewable Energy Plant – Install Biomass Gasifier and Steam Generator** project provides for the installation of both a new biomass gasifier and a biomass/natural gas fired steam boiler in the Oakdale Renewable Energy Plant. The new boiler, which will replace an outdated boiler, will increase the plant's steam output and provide steam for several new buildings on the University's Research Campus. In addition, it will serve as a demonstration project that will use wood chips and other biomass from local sources (e.g. construction and demolition waste, oat hulls and other energy crops), to produce a renewable gaseous fuel. (The map showing the location of the Oakdale Renewable Energy Plant is included as Attachment C.)

The revised budget for this project was approved by the Executive Director on January 26, 2011, subject to ratification by the Board of Regents. According to the University, Executive Director approval was essential to maintain the project schedule. The University seeks Board ratification of the revised budget in the amount of $7,308,779, an increase of $591,255 from the budget approved in March 2010. This budget revision provides the funds to complete the installation of owner supplied biomass gasifier and steam generator (boiler) components and begin the College of Engineering's use of the gasifier for biomass fuel analysis and the educational curriculum, and Utility and Energy Management's use of the biomass boiler for steam production.

Details of the Projects:

Cardiovascular Intensive Care Unit Renovation and Expansion

Project Summary

	Amount	Date	Board Action
Permission to Proceed		June 2010	Approved
Selection of Design Professional			
Heery International (Iowa City, IA)		June 2010	Approved
Initial Review and Consideration of Capital			Received
Project Evaluation Criteria		June 2010	Report
Design Professional Agreement	$ 1,381,000	Oct. 2010	Not Required*
Program Statement		Dec. 2010	Not Required*
Design Professional Agreement – Level 3	123,900	Feb. 2011	Not Required*
Schematic Design		Mar. 2011	Requested
Project Description and Budget	24,400,000	Mar. 2011	Requested
Final Review and Consideration of Capital			Receive
Project Evaluation Criteria		Mar. 2011	Report

*Approved by Executive Director, consistent with Board policies

Currently, patients with a cardiovascular or thoracic disease and requiring intensive care services are either admitted to the Cardiovascular Intensive Care Unit (CVICU) if they have a medical diagnosis or to the Surgical Intensive Care Unit after completion of surgery. The CVICU, which opened in 1985 and is UIHC's oldest intensive care unit, does not meet contemporary air handling requirements nor present day standards for the size of patient rooms. The renovated CVICU unit will permit the consolidation of all cardiothoracic ICU patients, both medical and surgical, in a single inpatient unit and in a manner that eliminates the need to transfer the patient to a separate room or inpatient unit once he/she no longer requires intensive care services.

Since permission to proceed with project planning was granted in June 2010, UIHC determined that the current HVAC system serving this area will need to be replaced due to its age and insufficient capacity to meet current standards. After studying possible options, it was determined that developing a system with the capacity to serve floors four - eight of this building will be the most cost effective since conversion of other inpatient floors to single patient rooms will require the same HVAC upgrades. Therefore, the project has been further developed to include a new mechanical penthouse and chases on each inpatient bay of the pavilion to house a duct system needed to meet contemporary and more rigorous heating, ventilation and cooling requirements.

To assist in accommodating patients who will be displaced from 4 JCP during renovation and expansion of the CVICU, a former clinical research inpatient unit located on the third level of the South Wing and consisting of approximately 8,000 GSF will be upgraded to accommodate pre and post procedure cardiology patients.

Also included is construction of a building addition of approximately 1,000 GSF on each of levels three through eight of the John Colloton Pavilion at its southeast corner. This space is required to meet the programmatic needs of this project and to accommodate the future space needs on other patient floors as the units on these floors are converted to all single patient rooms.

The new mechanical penthouses and duct enclosures will be clad with pre-cast concrete panels to match the existing pavilion's precast facade. The addition at the southeast corner will be clad with a new thermally improved aluminum and glass curtain wall system. The design of this curtain wall will match the existing aluminum framed windows in color and have excellent energy efficiency performance characteristics. The patient wing windows on Level 4 will be replaced to improve the performance of the building envelope.

The Level 4 renovation will contain six inpatient bays; each bay will contain four single patient rooms, a nurse station and a central teamwork area with storage for linen and supplies. Each patient room will have its own bathroom with shower, and a family zone will accommodate a sleeper sofa, lounge chair and computer desk with internet access. The unit's design will incorporate Evidence Based Design elements to improve patient outcomes and staff satisfaction.

The net (34,908) and gross (52,458) square footage of the schematic design are unchanged from those included in the program statement.

At a minimum, the project seeks to achieve a LEED (Leadership in Energy and Environmental Design) Silver rating for 2009 Commercial Interiors 3.0.

Construction is scheduled to commence in the fourth quarter of FY 2011, with construction to be completed during the third quarter of FY 2013.

Project Budget

Construction	$19,520,000
Professional Fees	1,952,000
Planning and Supervision	976,000
Project Contingencies	1,952,000
TOTAL	$24,400,000

Source of Funds: UIHC Building Usage Funds

Parking Ramps and Lots – Expansion of Commuter Lot 75

Project Summary

	Amount	Date	Board Action
Permission to Proceed		June 2010	Approved
Design Professional Selection Shive-Hattery, Inc; Iowa City, IA		July 2010	Not Required*
Design Professional Agreement	$ 302,010	Feb. 2011	Not Required*
Project Description and Budget	3,444,429	Mar. 2011	Requested

*Approved by Executive Director, consistent with Board policies

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Expansion of Commuter Lot 75 will provide a net gain of approximately 350 new spaces. These additional parking spaces will help offset parking spaces lost in lot 43 due to the proposed new West Campus Transportation Center (for which the Board granted permission to proceed with project planning in December 2010) and the resulting relocation of the Indoor Practice Facility.

Components of the project include the re-grading of the site, utility relocations, new parking lot lighting, new Portland cement concrete paving with integral curb and gutter, new fencing and landscaping. Also included will be the construction of a new access drive from the west which will accommodate Cambus traffic as well as normal vehicular traffic. The existing bike/pedestrian trail will be maintained and a new bus shelter will be installed.

Project Budget

Construction	$2,696,584
Planning and Design	484,871
Project Contingencies	262,974
TOTAL	$3,444,429

Source of Funds: Parking Improvement and Extension Funds

Oakdale Renewable Energy Plant – Install Biomass Gasifier and Steam Generator

Project Summary

	Amount	Date	Board Action
Permission to Proceed		June 2009	Approved
Design Professional Agreement - Implementation Planning and Technical Coordination/Support, Nexterra Systems Corp (Vancouver, BC, Canada)	$ 100,000	Sept. 2009	Not Required*
Selection of Design Professional, Shive - Hattery (Iowa City, IA)		Oct. 2009	Not Required*
Design Professional Agreement, Shive - Hattery (Iowa City, IA)	301,222	Mar. 2010	Not Required*
Project Description and Budget	6,717,524	Mar. 2010	Approved
Global Energy Solutions, Inc. (Wheaton, IL) - purchase of gasifier and generator	3,000,030	July 2010	Not Required*
Design Professional Agreement Amendment #1	49,888	Feb. 2011	Not Required**
Design Professional Agreement Amendment #2	50,857	Feb. 2011	Not Required*
Contract Award (Ryan and Associates; Davenport, IA)	2,638,000	Feb. 2011	Not Required*
Revised Project Description and Budget	7,308,779	Mar. 2011	Requested***

*Approved by Executive Director, consistent with Board policies

**Approved by University, consistent with Board policies

***Ratification of Executive Director action requested

During the design process/development of construction documents for bidding, several previously unidentified issues were discovered, remedies for which are required to complete the project. These include:

- Additional steel and foundation support of the existing building structure;
- Camera surveillance system for off-hours operation monitoring and to assist the educational component of the project;
- Additional segregated biomass material handling/storage and fugitive dust control measures;
- Upgrade of the existing compressed air system due to its inadequate size to support the biomass process;
- Difficult construction conditions due, in part, to the larger than expected biomass steam generator size;
- Structural deficiencies found in the existing coal storage area being converted to biomass storage, requiring additional shoring and structural reinforcement; and
- Improvements to the existing storm water management system.

Project Budget

	Budget March 2010	Revised Budget March 2011
Construction	$5,468,337	$6,060,547
Design, Inspection and Administration	703,688	848,232
Contingencies	545,499	400,000
TOTAL	$6,717,524	$7,308,779

Source of Funds:
US Department of Energy Grant (approximately $900,000) Utility System Earnings, Utility Revenue Bond Proceeds

Cardiovascular Intensive Care Unit Renovation and Expansion
Evaluation Criteria

Institutional Mission / Strategic Plan: Completion of this project will contribute to UI Hospitals and Clinics' efforts in meeting all elements of the UI Health Care mission, "Changing Medicine, Changing Lives." It will greatly enhance the UI Hospitals' capabilities for delivering superb patient care, innovative educational programs and facilitating pioneering discoveries. The project is also supportive of each of the six major goals that have been established in UI Health Care's Strategic Plan for FY 2010-2012 by providing the facilities that are required to assist UI Health Care's efforts 1) to provide world class healthcare services to optimize health for everyone, 2) to advance world class discovery through excellence and innovation in biomedical and health services research, 3) to develop world class health professionals and scientists through excellent, innovative and humanistic educational curricula for learners at every stage, 4) to foster a culture of excellence that values, engages and enables our workforce, 5) to create an environment of inclusion where individual differences are respected and all feel welcome, and 6) to optimize a performance-driven business model that assures financial success.

Other Alternatives Explored: Several alternatives were explored as a means to develop a combined medical and surgical cardiovascular intensive and intermediate care unit, including:

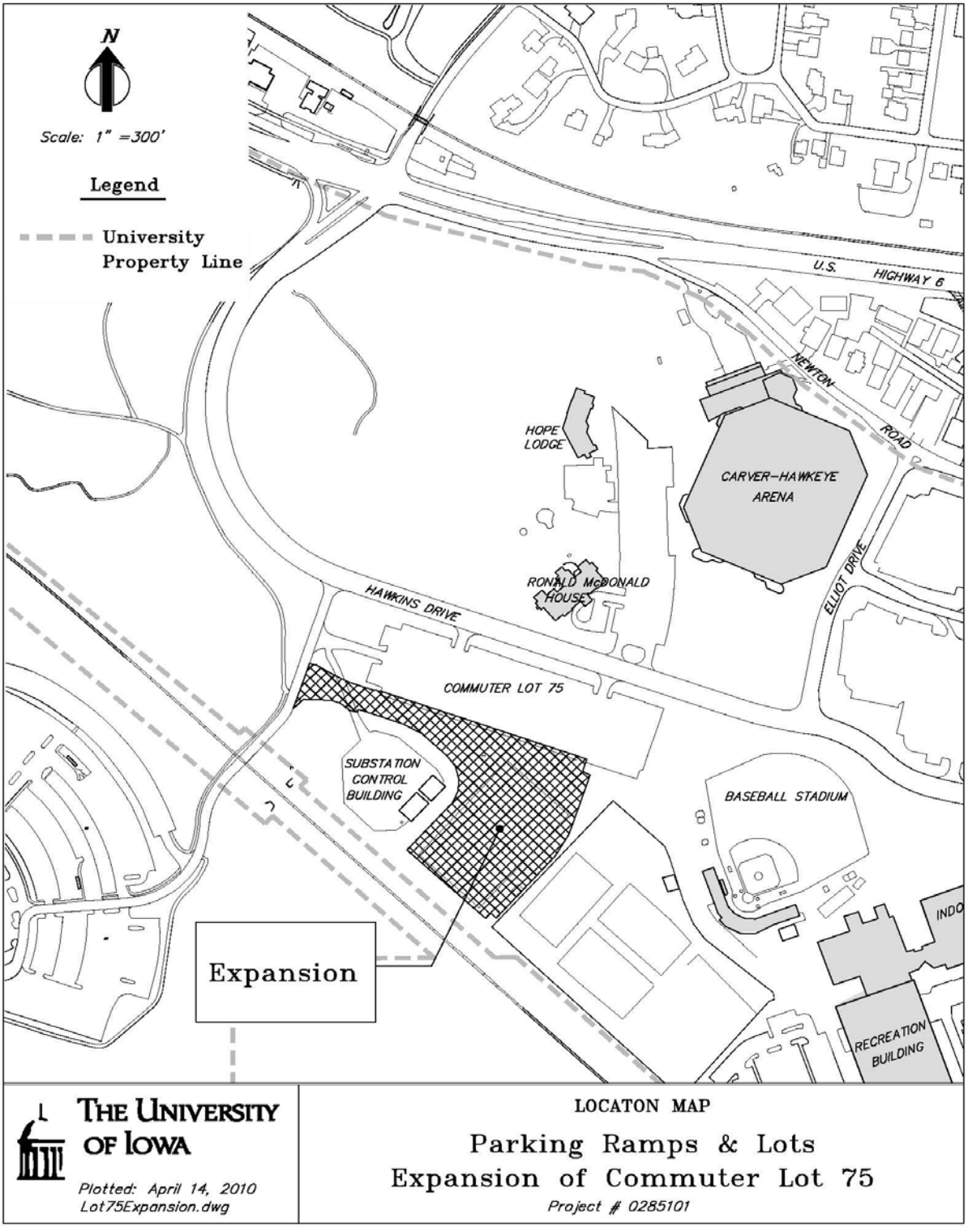
1. Gaining intensive care beds by extending the current CVICU into existing rooms on the adjacent 4 JCW medical cardiology intermediate care unit. This alternative was determined not to be viable due to inadequacies in the size and design of the 4 JCW rooms and the fact that only half (6) of the current CVICU rooms are large enough to accommodate cardiovascular surgery patients.
2. Combining the cardiovascular patients on the SICU. This alternative was ruled out due to the lack of sufficient beds to meet the need without impinging on the on-going need for beds to accommodate the surgical patient population. This location is also remote from other UI Heart and Vascular Center treatment units and services.
3. Constructing a new, ninth floor on John Pappajohn Pavilion to accommodate a consolidated medical-surgical CVICU patient population. This alternative was determined not to be practical due to its high cost and, as with the second alternative; its location would be remote from other UI Heart and Vascular Center treatment units and services.

Impact on Other Facilities and Square Footage: This project will not result in the abandonment, transfer or demolition of existing facilities. The beds that become available in the Surgical Intensive Care Unit as the result of this project will be used to accommodate the present demand and projected growth in surgical admissions for patients with neurological conditions, patients requiring transplantation of solid organs, other than heart or lung, and for other high acuity surgical patient populations.

Financial Resources for Construction Project: The project will be funded through University Hospitals Building Usage Funds acquired from depreciation allowances of third parties underwriting the cost of patient care plus hospital net earnings from paying patients. No state capital appropriated dollars will be involved. The preliminary estimate for the internal rate of return over the life of this project is 7.16%.

Financial Resources for Operations and Maintenance: The source of funds to cover the associated operating and maintenance costs will be hospital operating revenues derived from providing patient care services.

External Forces Justifying Approval: The renovation and expansion of this unit is an important element in enabling the UIHC to meet all components of its tripartite mission. Patient care will be enhanced through expanded facilities and the design of these facilities will be focused on providing a more comfortable and patient-friendly environment. The design will meet all building codes and standards, as well as standards from the 2010 Edition of the Guidelines for Design and Construction of Healthcare Facilities, developed by The Facility Guidelines Institute with assistance from the U.S. Department of Health and Human Services and published by the American Society for Healthcare Engineering of the American Hospital Association, which recommend single patient rooms for new hospital construction. These guidelines are used by Iowa and 41 other states to regulate hospital licensing and construction; and, will also be used by Medicare and the Joint Commission to develop new regulations and standards. The design will also meet Health Insurance Portability and Accountability Act (HIPAA) requirements for patient privacy and confidentiality.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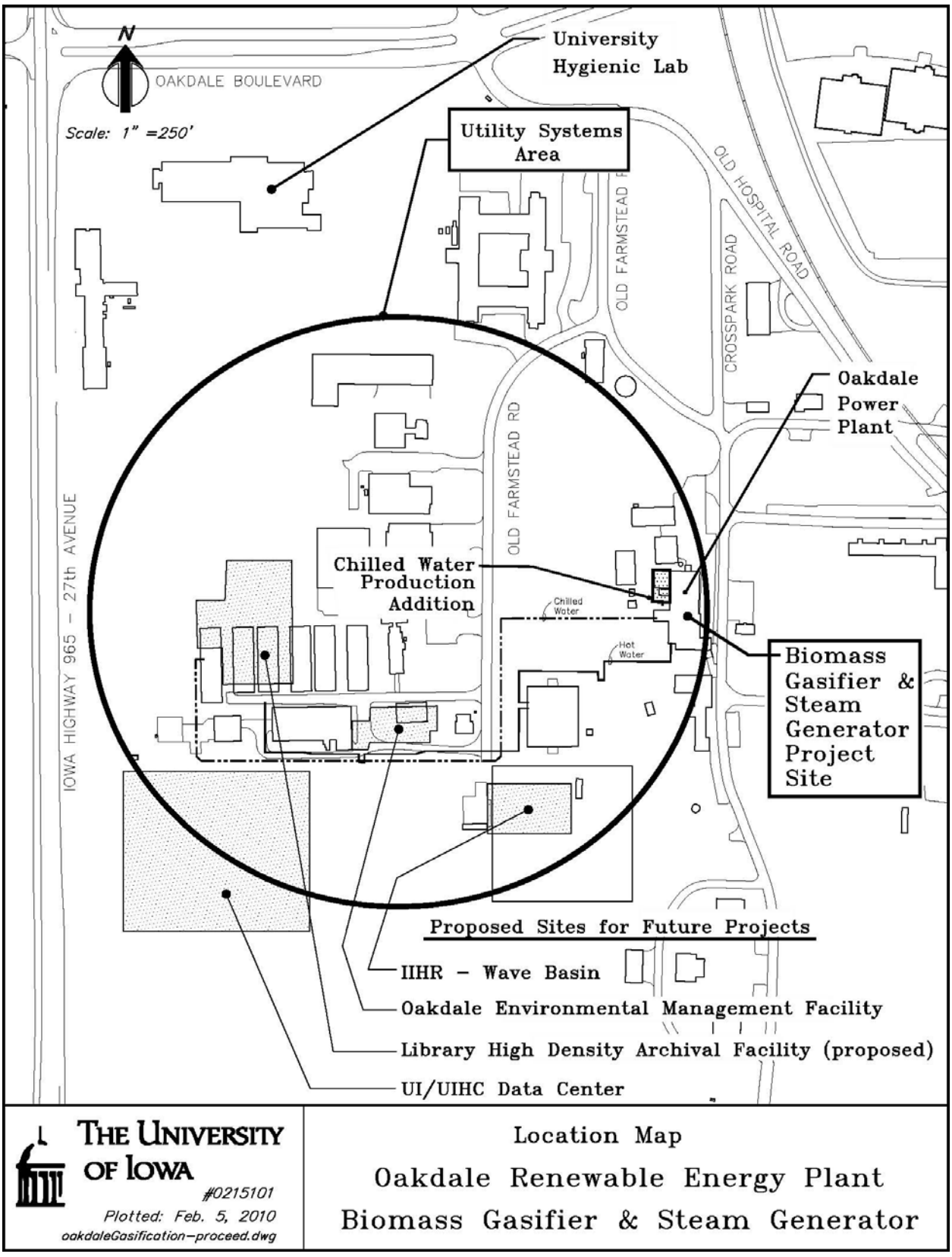
Scale: 1" =300'
Legend
University Property Line
U.S. HIGHWAY 6
NEWTON ROAD
HOPE LODGE
CARVER-HAWKEYE ARENA
RONALD McDONALD HOUSE
HAWKINS DRIVE
ELLIOT DRIVE
COMMUTER LOT 75
SUBSTATION CONTROL BUILDING
BASEBALL STADIUM
Expansion
RECREATION BUILDING
THE UNIVERSITY OF IOWA
Plotted: April 14, 2010
Lot75Expansion.dwg
LOCATON MAP
Parking Ramps & Lots
Expansion of Commuter Lot 75
Project # 0285101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OAKDALE BOULEVARD
Scale: 1" =250'
University Hygienic Lab
Utility Systems Area
OLD FARMSTEAD RD
OLD HOSPITAL ROAD
CROSSPARK ROAD
Oakdale Power Plant
IOWA HIGHWAY 965 – 27th AVENUE
Chilled Water Production Addition
Chilled Water
Hot Water
Biomass Gasifier & Steam Generator Project Site
Proposed Sites for Future Projects
IIHR – Wave Basin
Oakdale Environmental Management Facility
Library High Density Archival Facility (proposed)
UI/UIHC Data Center
THE UNIVERSITY OF IOWA
#0215101
Plotted: Feb. 5, 2010
oakdaleGasification–proceed.dwg
Location Map
Oakdale Renewable Energy Plant
Biomass Gasifier & Steam Generator